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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/905,716

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Fredric Joel Harris

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06/28/2005

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EXAMINER

WILLIAMS, LAWRENCE B

ART UNIT

PAPER NUMBER

2638

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/905,716

Applicant(s)

HARRIS, FREDRIC JOEL

Examiner

Lawrence B. Williams

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment filed on 14 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3-5 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The means or apparatuses “to enable a single processing function to simultaneously perform bandwidth control, spectral translation, and resampling for separate channels with similar and related spectral characteristics” as disclosed on page 11, lines 1-3 of applicant’s specification are critical or essential to the practice of the invention, but are not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Applicant discloses in his Description of Invention, page 10, lines 12-17, “a set of digital filters composed of polyphase partitions.... performing the functions of channelizing, of filtering, and of resampling...”. Nether of applicant’s claims 1, 3, 4, or 5 disclose the essential elements to accomplish these functions.

3. Claims 4-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4, cites “polyphase portioned filter weights simultaneously reassigned to

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registers for computation of register outputs....” Examiner is unable to find support for these limitations in the included specification.

4. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4, cites “....residing in each polyphase path to extract the separate signals by **destructive cancellation of the alias terms**”. Examiner is unable to find support for these limitations in the included specification.

#### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant’s claim 4 cites the “ a receiver structure that **embeds** both sample rate changes of the input data...”. It is unclear as to what is meant by the term “embeds” in applicant’s claim and how it relates to the claimed receiver structure. Examiner suggest applicant rewrite the claim to clearly and distinctly claim the invention.

#### *Claim Rejections - 35 USC § 103*

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McCoy (US Patent 6,134,268).

McCoy discloses a receiver for receiving and efficiently separating a composite 3-G wireless communications signal into its constituent base-band components, wherein said receiver combines multiple processing tasks of a conventional receiver into a single entity (602), said single entity performs the processing required for multiple channels in a single device, comprising a resampling polyphase filter bank wherein tasks of spectral translation, bandwidth reduction and of interpolation to change sample rate by a rational ratio are embedded, and a single polyphase filter operates in a resampling mode so that the input and output sample rates are different (col. 9, line 21- col. 10, line 44). Though, McCoy makes no specific reference to the terms, spectral translation and bandwidth reduction, it would be inherent to one skilled in the art that these functions would be inherent in the device to transform at least two rate changed-changed signals in to at least two frequency domain signals as disclosed in col. 9, lines 26-33).

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Wedin et al. discloses in US Patent 6,798,850 B1 Method And Arrangement In A

Radio Receiver System With Several Standards.

- b.) Allpress discloses in US Patent 5,926,455 Recursive Filters For Polyphase Structures.
- c.) Becker et al. discloses in US Patent 5,504,785 Digital Receiver For Variable Symbol Rate Communications.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw  
June 23, 2005



**KENNETH VANDERPUYE**  
**PRIMARY EXAMINER**